

KPFT

PACIFICA FM 90 PROGRAM GUIDE AUGUST 1977

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AUGUST!



FM AIR-CHAINS

OR

Playing the Audio Processing Game

By Frank Martin

In the past year or so, a pervasive new mania has manifest itself in the FM broadcast biz. Since FM radio is now available about 98% of the time to choose over AM in most instances, FM has become the major radio medium, that is, attracting more than half of radio's listeners over AM. Thus, the hotly competitive nature of mass media radio has migrated over the past several years from AM to FM, bringing with it insanely aggressive commercial management types who insist that their station have the kind of technically tailored "sound" that they envision will make their station the dominant force in their targeted market. This has led to a plethora of electronic entrepreneurs selling high priced limiters, automatic gain controls, "sound brighteners", dynamic presence equalizers, multi-band limiters and A.G.C.s, compressor expanders, ad infinitum, all promising to beat the competition's sound. Few stations have refrained from spending big bucks on new equipment to plunk in their audio chains in the past year or so, a competitive game that is old to AM radio, but comparatively new to the FM Stereo biz.

COMPETITIVE SOUND VS. QUALITY SOUND

Unfortunately, being competitive in the radio biz has always meant being "loud", a perplexing thing for FM since signal strength is independent of the level of modulation. Since the FCC allows only 100% modulation (75KHz deviation from center frequency) and no more, being loud means compressing as much RMS energy as possible into that channel. This is usually done with automatic gain controls that bring the level up or down to keep it constantly loud, limiters that keep fast rise time events from causing over-modulation, and usually a protection clipper that clips off any possible overmod causing events in the audio before transmission. Needless to say, all this processing means

distortion and lots of it, usually around fifteen percent at some frequencies, which accounts for the abysmal quality, from a high fidelity standpoint, of even the "serious music" commercial album oriented rock stations these days. This amount of distortion is literally fatiguing to listen to for any period of time, to say nothing of the complete lack of "dynamic integrity" (the difference in level between loud and soft parts of a recording) so that there are no piannissimos or mezzo fortes, only an artificioal triplé forte all the time. However, they are loud, thus satisfying the program director's and/or general manager's consuming desire to "stick out" on the dial of a car radio when their station is tuned to. This is why so many stations are fine tuned to sound best on a car radio, usually the Program Director's or General Manager's with little regard for high fidelity.

To 6

KPFT Voices:

Liselotte Babin

Liselotte Babin, with husband Bob at the control board, had just wound up her 262nd consecutive show when we approached her for this interview. Liselotte, for those who may not listen in Sunday mornings from 9:00 AM till noon, does a program she has named "A musical Trot With Liselott". The three-hour slot consists of two hours of German popular music followed by an hour of new tunes from a variety of European countries. On the first Sunday of each month she airs her "Houston Hit Parade of New German Records". The new German pop tunes are provided in

part by an avid fan of Liselotte's at the West German consulate here in Houston; the rest Liselotte mail-orders herself or has bought for her by fans traveling in Germany.

The show has one of the largest, most loyal followings of any regular KPFT program. As a few examples of her drawing power amongst the German-American community here in Houston, we can cite the last year's Octoberfest put on by Liselotte at the Busch Berg-park. Held on two consecutive Sundays, the first day drew 16,000 celebrants, the second day 14,000. The previous year's Octoberfest Liselotte had held at the Houston Oaks Hotel, where the 1,000 person Grand Ballroom was filled to capacity and would-be celebrants were turned away at the door. A Spring pre-Lenten Fasching party held last year in the top level of the Galleria had a crowd of 4,000 listening to 5 bands.

Liselotte's fans are responsive in other ways. Liselotte told that several years ago, when KPFT was located in an old, historic building at 618 Prairie Street in downtown Houston, she was sitting on a stool in front of the microphone when she felt a certain, instantly recognizable buckling sensation. She crashed down with her stool. Fortunately, the cat-clysm occurred when the microphones were turned off. A second stool she bought to replace the inferior KPFT model split a few shows later. She then confessed the two incidents to her listening audience, some of whom immediately took up a collection and purchased an unimpeachably sturdy model that Liselotte refers to as "The Cadillac of Stools".

Mrs. Babin first heard of KPFT in 1969, when she read an article in a Houston paper about the efforts of a group of Houstonians to establish a Pacifica Foundation affiliated non-commercial community access radio station in the area. She remembers being intrigued by the concept of "community access" radio, but didn't follow up with an inquiry. A year later, KPFT was a reality and a DJ named Horst Dietz had a German-language show. He went off the air after a few months to pursue other activities and Liselotte decided to give the station a call. After a conversation with the then manager, David Crosley, she took over the German-language program. The show grew over the subsequent months from an hour's length to two hours to three. It has been at its present three-hour Sunday morning location for over four years.

To 3

SPECIAL PROGRAMS THIS MONTH

THE FIRST TWENTY DAYS of August this year will be unique in KPFT history. After months of planning and co-ordination, the staff of KPFT has put together a twenty day series of all day specialty broadcasts. The complete list is available inside the guide. In conjunction with some of the specialty days, there will be events held at the station to which all KPFT listeners are invited.

Listeners should make a note to attend Liselotte Babin's European day on Sunday, August 7th. That Sunday picnic tables and chairs will be set up in the KPFT backyard, the German cultural group known as the Liederkrantz will be serving German food and an extensive variety of European beers and wines will be sold to raise funds for KPFT.

The following Sunday, August 14th, KPFT's motorcycle disc jockey, Rick Bagley, has organized an event known as "Motorcycle Safety Day". The event, a motor cycle rally with a course 42 miles long, will be the first event ever held in motorcycle history in the United States

that uses safety and skill as the winning criteria instead of speed or endurance. "The Reisner Street Riders", the Houston Police Department's own motorcycle club will be competing against clubs from all over Texas and places as far away as California. To enliven the event for spectators waiting at KPFT's building at 419 Lovett Blvd., there will be live music, hot chili, and cold beer.

In addition to these special events there will be live performances at KPFT on Tuesday, August 9th during Classical Music day and Saturday, August 13th during Bluegrass Day.

There will be remote broadcasts on Friday, August 5th during Literature Day when we will broadcast a Poets' Night reading live from Bowles Auction at 9pm. On Wednesday, August 17th, during Fine Arts Day, our beaux arts rapporteur Tejas Englesmith has arranged for a variety of Houston artists to discuss their epiphanies in the suitably inspirational environs of Chaucer's Bar at the Plaza Hotel, Cody's Club, and Ouisie's.

NEWS DAY

Wednesday, August 10, NEWS DAY

News from KPFT's various sources, including: Internews, Pacific News Service, Pacifica's National News Bureau in Washington plus The Wall Street Journal, New York Times, Houston papers; our sister stations WBAI in New York, KPFK in Los Angeles, KPFA in Berkeley, and WPFW in Washington, D.C. In addition we will provide informational tapes such as those provided by the SANE Organization. All this and more on NEWS DAY. Oh yes, there will be some music! If you like KPFT's news programming now is your chance to let us know. Call in your tax deductible pledge of support at 526-4000 or better yet come by the studios at 419 Lovett Boulevard with your donation. You'll be glad you did!

SHAPE UP

Shape Up with Sasha

Programmes of exercises designed for everybody to help reduce, shape-up, tone-up, sometimes build-up, and with an occasional section devoted to relaxation.

ARTS/ HOUSTON

Arts in Houston

Tues., August 23 and 30 from 9-10pm John Houchin and Tom Bickley continue to explore the arts in this grand metropolis.

CLASSICAL MUSIC DAY

Classical Music Day, Tuesday, August 9

A 24 hour sampler of KPFT, Pacifica, and NPR's own peculiar brand of classical music, alternative and otherwise. You'll hear music from many periods and cultures and great recorded performances from disc and tape. Also we will bring you as much live classical music as possible. Already scheduled is a performance by a brass quintet from the University of Houston. Its members are Jim Vassallo; trumpet, Mickey Vasquez; trumpet, William Jones; horn, Mike Haskell; trombone, and Steve Matchett; tuba. Pacifica airstaff will be Tom Bickley; coordinator, Dallas Mayer, Scott Sommers, and Ted Viens.

Artists' Advocate

Tejas Englesmith-"The Artists' Advocate"

A program of conversations with the people who are shaping and shaking the artistic growth and development of Houston. T 11:00 am

Remember Shakey Jimmy

FINE ARTS DAY

Fine Arts Day, Wed., Aug. 17

The 12 midnight to 6am slot will feature recorded interviews with artists from various media. Between 9am and Noon the discussion will be live and, when possible, you are invited to participate by phone. Art is Life, Short is Long. Tom Bickley/Coordinator 12midnight to 12noon Tejas Englesmith/Coordinator 12noon to 12midnight



PHOTOGRAPHY || Creative & Traditional. 528-1653 || GLYNDA

MOTORCYCLE SAFETY DAY

8:00 AM
to
4:00 PM

Sunday
August 14th

Beginning at 8:00 AM in front of the KPFT studios at 419 Lovett Boulevard in Houston, riders from all over the U.S.A. will assemble in teams to test their motorcycle safety awareness and riding skills over a 42 mile course around Loop 610. There will be trophies awarded at the end of the day. All those wishing to participate or experience this event, unique in the annals of motorcycle history, are urged to come to KPFT's studios on Sunday August 14th between the hours of 8:00 AM and 4:00 PM.

KPFT wishes to thank the following donors and supporters of Motorcycle Safety Day:

American Motorcycle Association, District 20
Houston Police Department
KUHT-TV
Discount Trophies
AMF Inc.
Motorcycle Safety Foundation
American Harley-Davidson
Cycle Sport
Biker Magazine
Texas Art Supply
Houston Chronicle
State Department of Highways
Hunziker Cycles
R-Z Estes
Hurst Supply Co.
Marriott Inns
Dedco Manufacturers
Mayor Fred Hofheinz

KPFT Studios, 419 Lovett, Houston

KPFT

PROGRAMS

AUGUST 1977

Liselotte

Continued.....

In process of assembling a weekly program, Liselotte has acquired an extensive record library. Additionally, Liselotte likes to fill the record introduction spots with literary and factual quotes from a variety of sources. Consequently, her book library has grown to over 3,000 volumes. Pouring over all this material requires several days each week.

All the preparatory work pays off. Tapes of Liselotte's shows are regularly mailed by recorder-listeners to fans all over the United States, and to countries ranging from Canada to places in Europe, Africa, and the Far East. German ships loading and unloading in the Ship Channel have made tapes of her shows for the crews enjoyment during long voyages.

Liselotte Babin's interest in radio has temporarily shelved her other avocation, writing. Mrs. Babin recalls having her first literary effort reach the public at age eight, when her home-town German newspaper, the Memeler Dampfboot, published a short story of hers in its Sunday supplement. When her family had to flee advancing Soviet armies in 1945, she walked with them through the Baltic-bred snows for 175 kilometers carrying her four favorite books, a two-volume collection of the works of Storm which she still consults, a copy of a humorous work entitled Ich und Dich, and a volume of poetry.

In the states, she began writing a column for a Chicago-based German language paper, Hausfrau. As her English improved, she first wrote a column in the Vidor, Texas weekly called the Vidorian. The column was entitled "Alien Outlook". Then Mrs. Babin switched to fiction, writing short stories for American men's magazines. As an exercise, she undertook the writing of a confession-magazine style story. The effort, a 17,000 word opus about a German girl in a Soviet Russian labor camp after World War II who undertakes to become pregnant so that her captors will repatriate her to avoid the burden of a maternity case, won third prize in the Confession magazine industry's national contest. The unusual piece was run under the title of "I Traded My Decency For Freedom".



Liselotte & Bob

On the subject of gestation, Liselotte confesses she is currently "with book". If she finds time in excess of what she devotes to her radio show and now-grown family of four sons, she will undertake writing one of six books she has sketched out in her head. She told



Liselotte Babin

us she found little support for her writting amongst the German community, as they reject everything that is "not Goethe". In the English language, audiences are more willing to accept writing that is "not Shakespeare", we observed. Besides writing in German and English, Liselotte also speaks Lithuanian.

While Liselotte only arrived in 1952, as a Korean war bride, her husband Bob Babin is a native of Port Arthur, Texas. He traced his Cajun family's background in the Americas back to 1685, when several ancestors landed in Nova Scotia. Deported by the British in the 1750's, many Acadiens were offered land by the King of Spain in Louisiana. A group of these Acadiens (A corruption of the word "Acadien" is the root word of "Cajun") arrived in Louisiana in 1785 in seven ships. Bob discovered 40 kinsfolk from among the complements of those ships. Between their two historically dramatic backgrounds, Liselotte may have the makings of several of her six novels. In addition, the German community in Houston has a history that goes back to the city's founding days after the Civil War. Currently, there is also a large population (Almost three thousand families) of German nationals working in Houston as representatives of many German firms dealing with the local construction and petroleum businesses.

"A Musical Trot With Liselotte" is a show that should be of interest to more than just persons of German background. The great output of the German music scene, past and present, should have an international appeal. We urge all KPFT listeners to give a listen some Sunday morning to Liselotte and Bob Babin's show.

SIRENS

Weds., 8:00 to 10:00 pm

- Aug. 10 **How to Start Your Own Business** Learn how women business owners got started.
- Aug. 17 **Interview** with a local musician.
- Aug. 24 **Learn About Your Body!** We'll be talking to women from the Women's Health Collective to find out how we can take better care of our bodies.
- Aug. 31 **Employment in a Man's World** How do you fit in? We'll be discussing the problems women have been facing in trying to alleviate employment prejudices.

RENAISSANCE

The Renaissance for August Aug. 18

As part of NPR day the Renaissance will present classical music from that network.

Aug. 25

Another Potpourri, more obscure suggestions, etc. Host: Tom Bickley

NPR DAY

NPR Day, Thursday, Aug. 18

NPR day will focus on the many facets of National Public Radio, the national non-commercial network with which we are affiliated. Through the day, from midnight until the following midnight, you will hear all of the NPR programs you now enjoy during our regular programming plus many other diverse programs that are available to us from NPR but are not used regularly by us. When you have heard the wide variety of programs available from National Public Radio, we would like you to give us a call or mail us a letter telling us the programs you have most enjoyed. This will help us in providing the maximum benefit from National Public Radio for you.

- Midnight The Outer Space News followed by Downtown Jazz.
- 1:00 Jazz Revisited
- 2:00 Options
- 3:00 Jazz Alive
- 5:00 B.B.C. Science Magazine
- 5:30 Washington Week in Review
- 6:00 World Report, International Money Program, Dateline
- 7:00 Morning News Service
- 7:15 Articles on the Arts
- 7:45 B.B.C. Radio Newsreel
- 8:00 Morning News Service
- 8:15 Magazine of the Arts, The World of Education
- 9:00 Morning News Service
- 9:15 Folkfestival U.S.A.
- 11:00 Options in Education
- Noon: B.B.C. Science Magazine
- 12:30 National Town Meeting
- 1:30 Dutch Treat
- 3:00 Articles on the Arts
- 3:30 The Goon Show
- 4:00 All Things Considered
- 5:30 Life on Earth
- 6:00 Voices in the Wind
- 7:00 Options
- 8:00 International Concert Hall
- 9:30 Pauline Fredericks and Colleagues
- 11:00 Downtown Jazz
- International Call,
- 11:00 Your World, Profile

CONNECTION

The Creative Connection

A one hour talk show every Wednesday morning 11:00 to 12:00. Hosted by Kenneth R. Petrucci, nationally recognized performing poet, author of Soul's Eye, founder and instructor "Creative Living Using the A.S.C. Method." The shows have been very entertaining plus focusing in on the creative craft of the featured guests. Past guests have included Mickey Rooney, Carol Channing, Joanne Worley, Ray Charles and others. Tune in and make your Creative Connection.

Airchain

CONTINUED

TECHNOLOGICAL FALLOUT

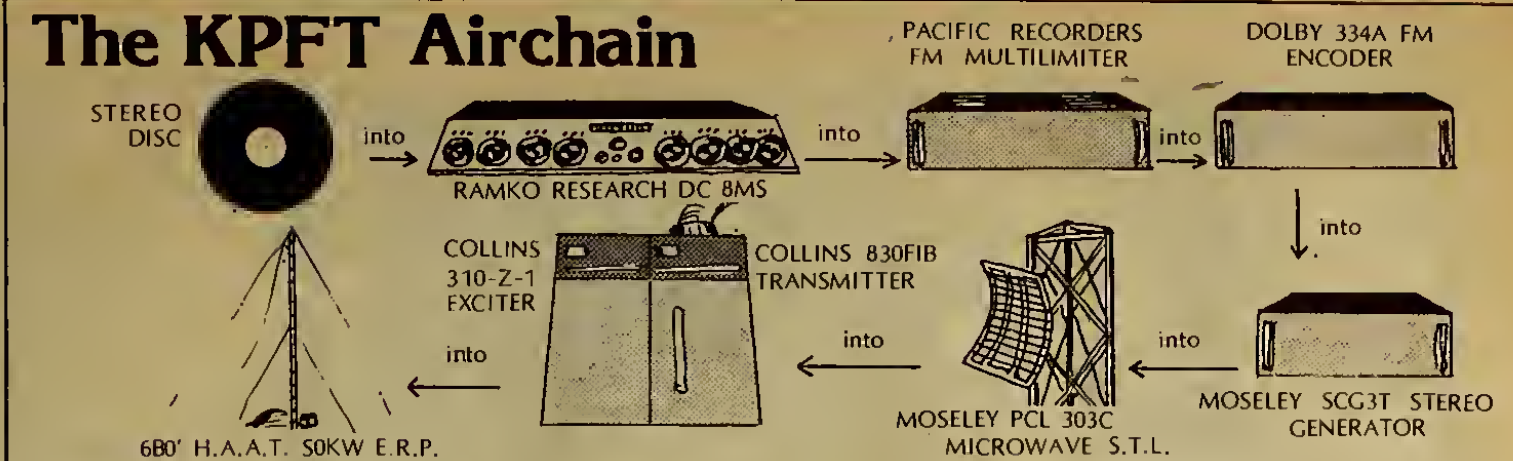
This FM loudness war has little relevance to non-commercial stations like KPFT where the Arbitron ratings have almost nothing to do with the station's operation or income. However, being loud means increasing the usable signal to noise ratio, an area where advances have been made in the interest of "loudness" that can be applied to KPFT, where the point of any audio processing is highest fidelity; lowest noise and distortion. In efforts to increase the maximum usable level, FM engineers ran into problems with their multiplex stereo generators; they produced modulation that wasn't there, degrading their "loudness" (usable signal to noise ratio) by as much as 3db or so, a difference very noticeable on a car radio. This modulation that wasn't in the audio was being produced by coil-type audio low-pass filters in the stereo generator that passed everything below 15 or 17KHz, depending on the design, in an effort to protect the 19KHz stereo pilot from stray program material that could find itself in the 19KHz area, confusing some tuners and causing distortion in the stereo demodulator part of your receiver. (A tone, transmitted continuously at 19KHz by stereo stations turns on your stereo light and serves as a synchronizing pilot for a stereo demodulator to locate left minus right information on a 38KHz suppressed carrier so that left and right channels can be decoded.)

In order to gain that extra signal to noise ratio lost when the low-pass filter "rings" when a waveform high in harmonics is fed to it, these lowpass filters have to be removed or replaced, and designs for solid-state "non-ringing low-pass filters" have become hot items in a loudness hungry FM broadcast equipment market. Right now, KPFT has taken advantage of this ploy to increase top level and thus signal to noise by removing the 17KHz lowpass filters in our Moseley SCG3T stereo generator and using instead a steep 19KHz notch filter that causes less ringing problems. Arriving in September will be a new Harris MSP15 digitally derived stereo generator, as part of our new transmitter project, that should provide a noticeable difference in signal to noise ratio on 90.1 MHz in Houston.

THE NECESSITY TO PROCESS AUDIO

In theory, the easiest way to preserve dynamic integrity and low distortion would be to broadcast unprocessed audio; straight from the turntable, microphone, or tape, without any gain reduction devices, fast limiting, or clipping. Unfortunately, this does not work, as fast events in program material will inevitably cause overmodulation and resultant great quantities of distortion. If level is reduced so that overmodulation does not occur with unprocessed audio, this brings the audio down into the noise, which is only so much in an FM Multiplex system, degrading signal to noise tremendously. Therefore, some kind of gain reduction device must be employed to provide an audio level "ceiling" referenced to 100% modulation to keep inexperienced operators from causing overmodulation. Since KPFT went on the air in 1970, this function has been performed by a CBS Labs 410 Volumax, a peak limiter that could provide only 3db of broadband gain reduction before going into severe clipping in order to protect from overmodulation. While this was fine for the majority of situations, clipping distortion often resulted when a sudden high level happened, sounding dim and fuzzy. Upgrading this essential component in our air chain, we've been experimenting with the Pacific Recorders FM Multilimiter, a limiter created for the "loudness market" mentioned earlier, that does not produce clipping distortion at all, but, as out tests showed, produces a rounded

The KPFT Airchain



waveform when fast limiting occurs, much like that produced when a vacuum tube amplifier overloads as opposed to the hard clipping of a solid state amplifier as utilized in the Volumax clipping diodes. More importantly, the Multilimiter can go into RMS gain reduction more than five times further than the Volumax before clipping occurs of any type. RMS gain reduction is dynamic distortion, however, perceived as thumpy or flattened bass and/or modulated percussion instruments, flying in and out of the audio intine with the bass line. While the RMS gain reduction used in the Multilimiter is the lesser of the evils on the market of that type today, it becomes somewhat objectionable in terms of dynamic integrity when driven beyond 2 or 3db of RMS gain reduction, a situation that occurs with any limiter or AGC, each type coloring the audio in its own distinctive way. Thus, at KPFT levels are set not to go too far into gain reduction, preserving fidelity in terms of dynamic integrity by using the RMS gain reduction to any extent only when an unexpected loud event occurs, only as a cushion against distortion when the board operator plays something inordinately high in level. This is an approach used successfully for years by our sister station in Los Angeles, KPFT, with their Spectra-Sonics equipment.

Following the Multilimiters, KPFT's audio is fed to a Dolby 334 FM encoder, changing preemphasis from 75 to 25 microsecond curve parameters, and making us sound less "bright" when not decoded, but allowing us to do much less high frequency limiting. "Dealing With Dolby FM" was covered in the May issue of the program guide if you need more information on what a Dolby system is and does.

GUERRILLA TACTICS IN AUDIO CONTROL

Another item that affects the sound of the station is the audio control equipment employed. In our case this means the main control board, a Ramko Research DCBMS, and the old standby Gates Stereo Yard. The controversial item here is the Ramko control board, using an approach to audio control radical enough and cheap enough that it could be termed an alternative media-guerrilla approach to audio control. At \$1900 for the basic eight channel twenty input stereo board, it is less than half the price of any comparable conventional design, and utilizes radical technological departures from the norm like noiseless, motionless touch pad control of audio switching and turntable and tape start functions, opto-isolated audio level controls, and RCA COS-MOS integrated circuits handling control and audio. This is where the controversy arises; I.C.'s handling audio are not held in high regard in audiophile circles because of low slew rates and other specifications that are supposed to limit noise, THD and IM distortion figures. We have yet to find these profound limitations on performance with the unit, however, with THD on our board thru a microphone input at under .25% and IM at less than .38%, signal to noise -75db on a microphone input, with THD measured at several frequencies between 25Hz and 17KHz. These measurements were made on our unit when we received it.

The old tube type Gates Stereo Yard is in the KPFT Air Studio, adjacent to the control room, to be used as production and as a standby control room. At this

Comparing Airchains

WHAT YOU'RE LISTENING TO ON HOUSTON FM:

At this writing, a telephone poll of Houston FM broadcasters revealed airchains that looked like this:

KUHF 88.7MHz
DISC into GATES DIPLOMAT CONSOLE into RCA BA 43 AGC into RCA BA 45 LIMITER into MOSELEY PCL 50SC MICROWAVE S.T.L. into RCA BTF 3 3KW XMTR into CHANNEL 8 TOWER, ALVIN, TEXAS, 1100' H.A.A.T. 26 KW E.R.P. (Proposed Orban Optimod limiter)

KTRU 91.7
DISC into LOGITEK CUSTOM CONTROL CONSOLE into CUSTOM COMPRESSOR/LIMITER (Patterned after E.M.T. digital sampling design) into PHONE LINES into GATES SERRASOID STEREO GENERATOR (optional) into GATES FM 250A XMTR into 200' H.A.A.T. on Richardson Dormitory, Rice U. 340W E.R.P.

KYND 92.5
OPEN REEL TAPE into GATES STEREO STATESMAN CONSOLE into MOSELEY PCL 303 MICROWAVE S.T.L. into CBS 4110 VOLUMAX into GATES TE-3 STEREO GENERATOR into GATES FM 20H3 XMTR into 860' H.A.A.T. on 1 Shell Plaza. 97KW E.R.P.

KRLY 93.7
BROADCAST CART into GATES EXECUTIVE CONSOLE into GATES AGC into INOVONICS LIMITERS into U.R.E.I. HALF-OCTAVE GRAPHIC EQUALIZER into MARTI LIMITERS into MARTI MICROWAVE S.T.L. into RCA/MOSELEY 1B STEREO GENERATOR into RCA BTF 20E1 XMTR into 860' H.A.A.T. on 1 Shell Plaza. 100KW E.R.P.

KLEF 94.5
DISC into COLLINS CONTROL CONSOLE into PHONE LINES into ORBAN OPTIMOD 8000A AGC/LIMITER/STEREO GENERATOR into DOLBY 334A FM ENCODER into GATES FM 20H1 XMTR into 650' H.A.A.T. on Tenneco Bldg. 100KW E.R.P.

KIKK 95.7
BROADCAST CART into GATES EXECUTIVE CONSOLE into CBS LABS AUDIMAX A.G.C. into MARTI MICROWAVE STL into ORBAN OPTIMOD FM AGC, LIMITER, STEREO GENERATOR into GATES FM 20H1 XMTR into 860' H.A.A.T. on 1 Shell Plaza. 47KW E.R.P.

writing, it isn't hooked up for use at its full potential, so if you're interested in broadcast engineering volunteer work, give us a call or stop by and take a look at the standby control room project.

This brings us to our biggest problem right now in engineering; lack of funds. Funds for projects like the aforementioned standby control room, the new transmitter project and people to work on it. Government grants cover only specified pieces of equipment, and KPFT must match a percentage of project costs, our only income being listener donations. No other FM station in Houston provides the programming variety KPFT does, and no other Houston FM stations provides the high fidelity, dynamic range, low noise, and distortion free signal that we are constantly trying to improve. The other stations' interests lie elsewhere, ours lie solely with you, the listener, not the ratings. We think that KPFT listeners wouldn't have their signal any other way than with lowest noise and distortion and the highest fidelity technology and economic reality permits. Listener support provides that economic reality, so send tax deductible donations to TRANSMITTER PROJECT, 419 Lovett, Houston, TX 77006.

H.A.A.T.: Height Above Average Terrain
E.R.P.: Effective Radiated Power
S.T.L.: Studio Transmitter Link
XMTR: Transmitter

KAUM 96.5
BROADCAST CART into McCURDY CONTROL CONSOLE into ORBAN OPTIMOD FM AGC/LIMITER/STEREO GENERATOR into MOSELEY PCL 303 MICROWAVE STL into RCA BTF 50E2 DUAL 20KW XMTR (operating at 27.5KW) into 580' H.A.A.T. on KNUZ tower. 100 KW E.R.P.

KFMK 97.9
BROADCAST CART/DISC into MCMARTIN CONSOLE into COLLINS 26U2 LIMITER (AGC) into TAPCO REVERBERATION SYSTEM into PHONE LINES into CBS LABS 4110 VOLUMAX LIMITER into COLLINS 3102-2 STEREO GENERATOR into COLLINS B316-2 20KW XMTR into 450' H.A.A.T. Englewood R.R. Yard. 100KW E.R.P.

KODA 99.1
OPEN REEL TAPE into SCHAEFFER B00 AUTOMATION SYSTEM into ORBAN OPTIMOD FM AGC/LIMITER/STEREO GENERATOR into MOSELEY PCL303C MICROWAVE S.T.L. into WILKINSON FM EXCITER into RCA BTE 20 20KW XMTR into 860' H.A.A.T. on 1 Shell Plaza. 97KW E.R.P.

KILT FM 100.3
BROADCAST CART/DISC into GATES STEREO 80 CONSOLE into CUSTOM DYNAMIC PRESENCE CONTROL H.F. GAIN REDUCTION into CBS AUDIMAX A.G.C. into PHONE LINES into LOWPASS FILTERING into GATES LIMITERS into DIODE PROTECTION CLIPPERS into GATES STEREO GENERATOR into HARRIS/GATES FM20H3 20 KW XMTR into 860' H.A.A.T. on 1 Shell Plaza. 97KW E.R.P.

KLOL 101.1
DISC into GATES EXECUTIVE CONSOLE into GATES A.G.C. into SANSUI QSE5B QS QUAD MATRIX SYNTHESIZER / ENCODER (optional) into PHONE LINES into GATES FM LIMITERS into GATES STEREO GENERATOR into GATES FM20H3 XMTR into 860' H.A.A.T. on 1 Shell Plaza. 97KW E.R.P.

KMIQ 102.1
BROADCAST CART/DISC into COLLINS AUDIO CONTROL CONSOLE into PHONE LINES (Optional microwave from Clear Lake Studios) into MOSELEY TFL-2B0 FM LIMITERS into COLLINS 310Z-2 STEREO GENERATOR into COLLINS 831G-2 20KW XMTR into 860' H.A.A.T. on 1 Shell Plaza. 97KW E.R.P.

KNUZ 102.9
BROADCAST CART into RAMKO RESEARCH DCBMS BOARD into CBS LABS AUDIMAX into GARRON STEREO PHASE ENHANCER into PHONE LINES into ORBAN OPTIMOD FM AGC/LIMITER/STEREO GENERATOR into DUAL GATES FM20H XMTRS (40KW) into 580' H.A.A.T. KNUZ tower. 280KW E.R.P. Proposed Harris MSP-100 Signal Processor.

KRBE 104.1
BROADCAST CART into CCA ULTIMATE CONSOLE into GATES AGC into PACIFIC RECORDERS MULTIMAX TRIBAND A.G.C. into PACIFIC RECORDERS FM MULTILIMITER (modified) into CCA SGIE STEREO GENERATOR into PROTECTION CLIPPING into MOSELEY PCL50SC MICROWAVE S.T.L. into CSI FREQUENCY SYNTHESIZED DIRECT FM EXCITER into CCA 25,000 DS TRANSMITTER into 860' H.A.A.T. on 1 Shell Plaza. 97KW E.R.P.

KHCB 105.7
DISC/TAPE into RCA CONTROL BOARD into GARRON STEREO PHASE ENHANCER into INOVONICS LIMITERS into MARTI DUAL MICROWAVE S.T.L. into I.T.A. STEREO GENERATOR into I.T.A. 20KW XMTR into 450' H.A.A.T. on Almeda Rd.

Jerry Jeff Walker & the Lost Gonzo Band



Photo: GLYNDA

Mr. Monterrey Jack Cheez, here depicted in a genuine artist's conception of free-fall, will jump from an airplane on Saturday, August 27th. He will land at a pre-arranged target site at the Spring Creek Parachute Ranch. This will be Mr. Cheez' first jump.

All KPFT listeners are invited to attend and witness this death-defying act in person.

Cheez is making this virgin jump to dramatize KPFT's desperate financial situation. Show your support for Cheez and KPFT and send a check today. Those who send checks over \$5.00 will receive an autographed 8 x 10 glossy of Jack Cheez in simulated free-fall.

Do it today!

